

more or less wholly obsolete, represented only by a few coarse scattered dark fuscous scales. The species is however a good and distinct one, separated, as indicated above, from its nearest allies by the darker hindwings.

*Arotrophora xythoptera*na.

Larva moderately stout, cylindrical, rather tapering posteriorly; dull bluish-grey-green, spots darker; head and second segment black. It feeds in a short stiff silken tube amongst leaves of *Lomatia silaifolia* (*Proteacæ*), discolouring them conspicuously. Pupa in a firm silken cocoon covered with refuse, within the end of the tube.

The larvæ were found in July, and I bred two imagos (male and female) at the beginning of August.

---

ON A SPECIES OF THE PHASMATIDÆ DESTRUCTIVE TO EUCALYPTI.

BY WILLIAM MACLEAY, F.L.S.

At a meeting of this Society last month, Mr. C. S. Wilkinson, the Government Geologist, exhibited three specimens of a *Phasma* which he had obtained a week or two previously in the vicinity of the Binda Caves, in the county of Westmoreland. He informed the meeting that he had found these insects in amazing numbers in that locality; that the trees for miles around were completely denuded of leaves, and that the dead and dying insects were lying beneath the trees almost in heaps.

The occurrence of a *Phasma* in such numbers is a very remarkable fact, and perfectly new as far as my experience goes. I judge also from observations made at the time of Mr. Wilkinson's announcement by the members present that all were equally struck with the unusual character of the occurrence. The *Phasmidæ* or *Phasmatidæ* as they are now more properly called, are, as we know, all leaf-eaters, and it is rare in any part of the

country in the summer season to find a gum tree without a few of these insects grazing on it. But, though very widely and generally distributed, this is the first instance I believe recorded of one of the family being found in such multitudes as to cause the entire destruction of large areas of forest. Mr. Wilkinson's discovery shows, however, that such cases occur, and the question will naturally arise in many minds: "May not the hitherto unaccountable death of gum trees over large areas in different parts of the country be due to the occasional superabundance of the leaf-eating *Orthoptera*? Among the many causes suggested for the dying out of the gum tree over large areas, as may be seen for instance throughout a large portion of the Lake George Basin, I have heard the opossum named, and this probably, because observers may have noticed the dying trees looking as if their leaves had been eaten; but I never could believe that an animal which, like the opossum, is fond of travelling long distances at night in search of food would fix himself to leafless trees for a period long enough to cause their death. But Mr. Wilkinson's *Phasma* clearly does denude trees completely of their leaves, and it is inevitable that a tree submitted to such a process for two or more consecutive years must die.

From what is known of the habits of the *Phasmatidæ*, I should say that they are the most likely of all insects to retain their position on a tree or in a mass of trees as long as they possibly can, and that when their food supply is exhausted by the death of the tree, they drop to the ground and die. Many of the *Phasmatidæ*, no doubt, have wings, and Mr. Wilkinson's species rather large ones; but, unlike their saltatorial and migratorial brethren, the *Gryllidæ* and *Locustidæ*, they seldom use them, and never take long flights. Among the *Phasmatidæ* most, if not all, the adult insects die at the beginning of winter, dropping off the trees as soon as the frosts set in, but they have previously fastened their egg-cases securely on the upper branches, so that the warmth of spring produces an abundant crop of young to complete the destruction commenced by their parents.

Mr. Wilkinson has kindly presented me with the specimens he exhibited at last meeting. I find them to be of a new and undescribed species, closely allied to the well-known Sydney species *Podocanthus typhon*, but differing in some important particulars. I name it after its discoverer.

PODOCANTHUS WILKINSONI.

Head above, behind the antennæ, with several impressed longitudinal lines, antennæ twenty-four jointed, about the length of the anterior legs in the male, shorter in the female. Prothorax narrower than the head, and becoming narrower to its junction with the mesothorax, its length being about equal to the length of the head behind the antennæ; the mesothorax is rather narrower and scarcely longer than the prothorax except at its base, where it widens out; it is covered beneath and on the sides with small tubercles, and on the back with a double row of five larger tubercles; the metathorax is longer than the mesothorax, and much wider; it is sharply tuberculated beneath, as are also, though in a less degree, the abdominal segments. The tegmina are rather pointed—in the female half the length of the wings, in the male about one-third. The wings are moderately large and equal in both sexes. The legs are rather short; the hind femora strongly dentated beneath on the inner and outer edge, with a deep groove between; the intermediate femora are armed in the same way, but not so strongly; and the anterior are grooved beneath, but not dentated. The basal joint of the tarsi is a little the longest, except in the intermediate legs.

The specimens have been in spirits and therefore it is impossible to make out the colouration with certainty, but the body seems to have been of a reddish-brown, almost black beneath, the wing coverts yellowish, with the median carina brown, the costal area of the wings brownish-yellow, and the wings themselves hyaline, without any visible rosy tint. Length of male three inches six lines; the female is not longer nor bulkier than the male. This

uniformity of size in the sexes, if constant, is, I believe, quite unprecedented in this family of insects.

If it should be found that the ravages of this or any other species of the *Phasmatidæ* are the causes of the wide-spread destruction of trees now going on in many parts of the colony, it will, I think, be a simple matter to limit, where the timber is of sufficient value, the extent of the injury by clearing a wide belt round infested spaces.

---

NOTES AND EXHIBITS.

Dr. Cox exhibited a fine specimen of *Cypræa princeps* from Warrior Reef, Torres Straits, a rare shell, hitherto known only from the Red Sea. Also a specimen of ancient carving from the Solomon Islands, representing probably a deity holding a mask, and from New Zealand a "Meri" made from the lower jaw bone of a whale, and a grotesque figure of Greenstone the property of W. J. Dangar, Esq., of Neotsfield.

Mr. Brazier exhibited *Amplexa turrita*, described in Professor Tate's paper. Also specimens of *Ancylus Australicus* and *Limnæa papyracea*.

---

WEDNESDAY, MAY 25TH, 1881.

---

W. J. Stephens, Esq., M.A., in the Chair.

---

MEMBER ELECTED.

J. J. Fletcher, Esq., M.A., Parramatta.

---

DONATIONS.

Report of Zoological Station Naples, for 1880.

Proceedings of the Finland Society of Botany and Natural History for 1875-77 and 187-76 and 78.